

A NEW SPECIES OF *EUASTACUS* (DECAPODA: PARASTACIDAE)  
FROM NORTH QUEENSLAND

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ABSTRACT

*Euastacus robertsi* sp. nov., from Mt Finnigan, near Cooktown, NE.Q., is described. This species resembles *E. fleckeri* except in colouration, carpal spination, and its triangular rostrum.

The genus *Euastacus* was revised by Reik (1969) to include twenty-seven species, of which only one, *Euastacus fleckeri* (Watson, 1935), was found north of the Mary River, SE.Q. *Euastacus fleckeri* is known from the drainage of Mt Spurgeon and Mt Lewis, near Mt Molloy, NE.Q. Recent field work has yielded a new species from the peak of Mt Finnigan, 80 km north of Mt Spurgeon (Fig. 1).

***Euastacus robertsi* sp. nov.**  
(Plate 19, figs. A-G)

MATERIAL EXAMINED

HOLOTYPE: Queensland Museum W5323, ♂, 1050 m, Horan's Creek, Mt Finnigan National Park, NE.Q., coll. 27.xi.1975, L. Roberts, R. Monroe, G. Ingram.

PARATYPES: W5324, 7 ♂♂, 11 ♀♀, same data as holotype.

DIAGNOSIS

*Euastacus* with an acute triangular rostrum; one large, and two to three small, lateral tubercles on the metopic plate; an accessory row of tubercles on the outer surface of each finger; three to four mesial spines on the carpus; a row of five to seven weak spines along the distero-ventral margin of the carpus, and a spine (the strongest) ventro-mesially.

DESCRIPTION OF HOLOTYPE

Total length (rostral tip, posterior edge of telson) 108 mm.

Cephalothorax: 47.5 mm long, 23.5 mm wide. Cephalic part (28.5 mm long) with numerous blunt tuberosities laterally, glabrous dorsally; rostrum acute (6.0 mm long, 5.5 mm wide at base), sides straight, 3 blunt spines on each raised margin, a

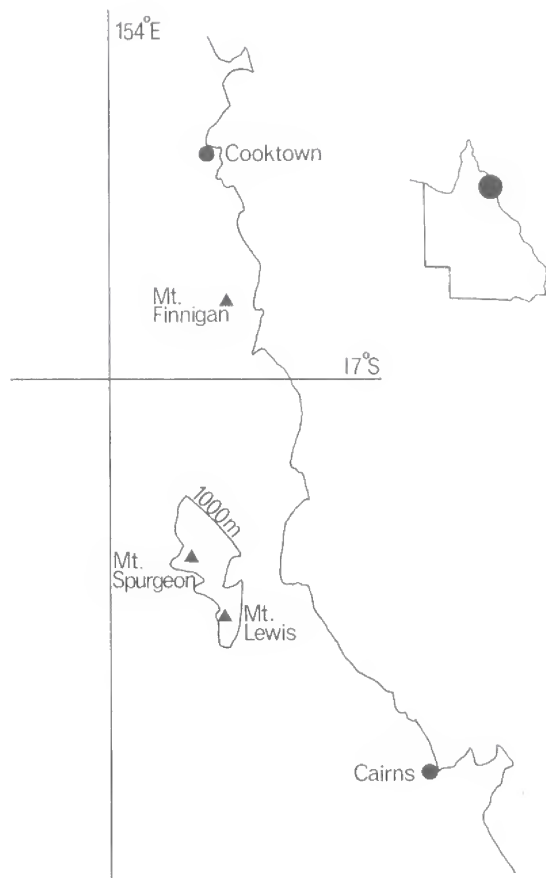


FIG. 1: Locality map, Mt Finnigan, Mt Spurgeon, and Mt Lewis, Queensland.

shallow groove medially runs back into the cephalothorax; post orbital ridge short (3 mm), grooved, with hair tufts, no spine at anterior end, a longer (8 mm) row of punctations mesially; interantennal spine 2.25 mm × 1.5 mm, straight sided, with 3 small spines at tip; metopic plate smooth, with very sparse short hairs, 11.5 mm wide, lateral wings of metopic plate with 1 large and 2 (left) or 3 (right) small tubercles, shortest length of wings 3.0 mm. Thoracic part with sparse short hairs; areola (19 mm × 6 mm) with 2 longitudinal rows of short hairs; branchiostegites with numerous small round tuberosities, no spines; sternal keel emarginate between first and second periopod, straight between second and third, and convex between third and fourth periopods.

Abdomen: With sparse short hairs; the second pleura with a row of 5 tubercles, the third with 1 spine, laterally; the telson with a lateral spine on each margin; endopodite of uropod with a lateral and medial spine, the exopodite with a central spine, with a row of teeth on each side, and a lateral spine, at the junction of the calcified and membranous parts.

Antenna I: Outer flagellum (17 mm) exceeds inner (15 mm).

Antenna II: Flagellum 71.5 mm long; basal spine prominent, antennal scale with a spine apically, reaching the distal end of the peduncle, expanded mesially.

Third Maxilliped: A spine laterally at apex of ischium, exopod exceeds ischium.

First Periopod, right (left): Merus, 21 (20) mm long upper edge with a row of 6 (6) small spines on the proximal half; 2 (2) round blunt tubercles dorsally at the distal end, the ventro-mesial margin with 9 (8) spines, the ventro-lateral with 3 (4); a small hair tuft on the dorso-distal margin.

Carpus, 17 (16.5) mm long, a slight depression on the dorsal surface, spination complex. There are 4 (3) strong spines in the mesial row. There is an irregular row of 5 (7) weak spines parallel to the distero-ventral margin, the most mesial of these lying on the mesial margin of the carpus in line with the row of strong mesial spines (giving the appearance of one extra spine in the mesial row). There is a strong ventro-mesial spine adjacent to the mesial row.

Prodopus, 41.5 mm × 19.5 mm (35.5 × 17.5); the lateral margin with one complete, and a second incomplete row of blunt spines; the upper surface distolaterally with blunt round tubercles; mesial margin with 7 (7) low blunt spines; cutting edge of fixed finger with 7 (4) spines.

Dactyl, 19.5 (18) mm long; 8 (5) spines on the cutting edge with a row of hair tufts either side of

this; an accessory row of 7 (6) small spines laterally.

Colour in life: Dull blue-purple with a longitudinal red-brown mark dorsally on the carapace and the tips of larger spines.

#### VARIATION IN PARATYPES

All the paratypes are smaller than the holotype. In the smaller paratypes the sides of the rostrum are convexly angled but otherwise the general morphology is similar to that of the holotype. The smaller tubercles on the lateral wings of the metopic plate are fewer in some specimens, as are the tubercles on the branchiostegites and anterolateral cephalothorax. The spines on the upper edge of the merus are most commonly 6, on one 4 on another 7. The dorso distal tubercles are 2 except in one paratype where only 1 is present. Spines on the ventromesial margin are from 5 to 9, on the ventrolateral 3 except in one case where 4 are present. There are 3 or 4 strong spines mesially on the carpus, most commonly 4. The strong ventromesial spine is, in one specimen, so mesial as to be almost one of the mesial row. In all other cases it is quite separate. The row of weak spines on the ventral surface varies from 2 to 5, the most mesial (in line with the row of strong mesial spines) being absent in some specimens, and the disposition of the remainder is often quite irregular.

Spines on mesial margin of prodopus are 5 to 7, most commonly 6, teeth on the cutting edge of the fixed and moveable fingers are very variable in number and distribution. The accessory spine row laterally on the dactyl has fewer spines in the paratypes, and in very small paratypes (< 20 mm carapace length) is present only as a ridge.

#### DISCUSSION

*E. robertsi* is known only from Mt Finnigan, above about 1000 m. It is found in streams and pools where it either burrows in the bank or makes use of natural crevices for shelter. All specimens of the type series were taken during the day from under rocks or in beds of leaf litter. Most burrows seen had one or two entrances, though some may have had more. At night *E. robertsi* was seen just inside burrow entrances with the antennae and large chelae protruding.

*E. robertsi* is easily distinguished from all species except *E. fleckeri* in having the largest ventral carpal spine well back from the anterior margin of the carpus. It is distinguished from *E. fleckeri* by the shape of the rostrum (rounded U-shape in *E. fleckeri*, acute triangular in *E. robertsi*), the colour (azure blue with red tips to spines and fingers for *E. fleckeri* and as described above for *E. robertsi*), and

the carpal spination. *E. fleckeri* has an oblique row of 3 strong spines on the ventral surface of the carpus, *E. robertsi* has the arrangement described above.

#### ACKNOWLEDGMENTS

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#### LITERATURE CITED

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